

# Installation Instructions

## Control Cassettes

### VLT<sup>®</sup> Midi Drive FC 280

There are 6 types of control cassettes for VLT<sup>®</sup> Midi Drive FC 280:

- Standard control cassette.
- Control cassette with PROFIBUS.
- Control cassette with PROFINET.
- Control cassette with CANopen<sup>®</sup>.
- Control cassette with EtherNet/IP<sup>™</sup>.
- Control cassette with POWERLINK.

The installation instructions in this manual apply to all control cassettes. For all control cassettes, except for the standard cassette, mount the decoupling kit after mounting the control cassette. Find the instructions on mounting the decoupling kit in the kit package.

For information on how to program the control card, refer to:

- *VLT<sup>®</sup> Midi Drive FC 280 Programming Guide.*
- *VLT<sup>®</sup> Midi Drive FC 280 PROFIBUS Programming Guide.*
- *VLT<sup>®</sup> Midi Drive FC 280 PROFINET Programming Guide.*
- *VLT<sup>®</sup> Midi Drive FC 280 CANopen<sup>®</sup> Programming Guide.*
- *VLT<sup>®</sup> Midi Drive FC 280 EtherNet/IP<sup>™</sup> Programming Guide.*
- *VLT<sup>®</sup> Midi Drive FC 280 POWERLINK Programming Guide.*

VLT<sup>®</sup> is a registered trademark.

CANopen<sup>®</sup> is a registered trademark for CAN IN AUTOMATION international users and manufacturers group e. V.

EtherNet/IP<sup>™</sup> is a trademark of ODVA, Inc.

### Items Supplied

One of the 6 types of control cassettes:

- Standard control cassette (132B0345).
- Control cassette with PROFIBUS (132B0347).
- Control cassette with PROFINET (132B0348).
- Control cassette with CANopen<sup>®</sup> (132B0346).
- Control cassette with EtherNet/IP<sup>™</sup> (132B0349).
- Control cassette with POWERLINK (132B0378).

### Safety Instructions

#### **⚠ WARNING**

##### DISCHARGE TIME

The frequency converter contains DC-link capacitors, which can remain charged even when the frequency converter is not powered. High voltage can be present even when the warning LED indicator lights are off. Failure to wait the specified time after power has been removed before performing service or repair work can result in death or serious injury.

- Stop the motor.
- Disconnect AC mains and remote DC-link power supplies, including battery back-ups, UPS, and DC-link connections to other frequency converters.
- Disconnect or lock PM motor.
- Wait for the capacitors to discharge fully. The minimum duration of waiting time is specified in *Table 1.1*.
- Before performing any service or repair work, use an appropriate voltage measuring device to make sure that the capacitors are fully discharged.

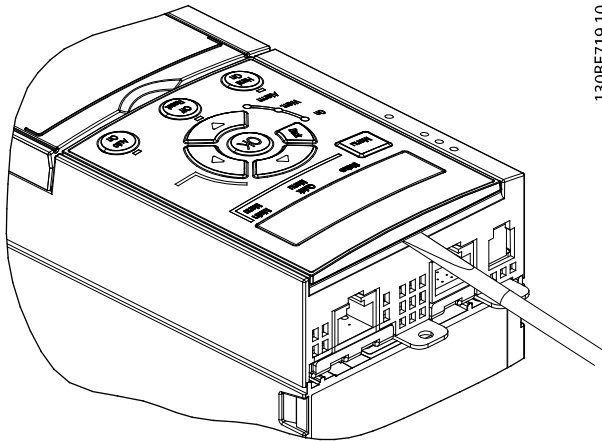
Voltage [V]	Minimum waiting time (minutes)	
	4	15
200–240	0.37–3.7 kW (0.5–5 hp)	–
380–480	0.37–7.5 kW (0.5–10 hp)	11–22 kW (15–30 hp)

Table 1.1 Discharge Time

Refer to the *VLT<sup>®</sup> Midi Drive FC 280 Operating Guide* for detailed information about safe installation of the frequency converter.

## Mounting

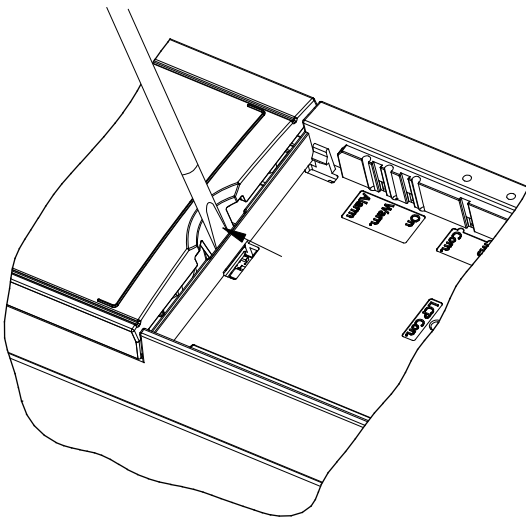
1. Remove the LCP with a flat-edged screwdriver (accessed from the top), as shown in *Illustration 1.1*.



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Illustration 1.1 Remove LCP

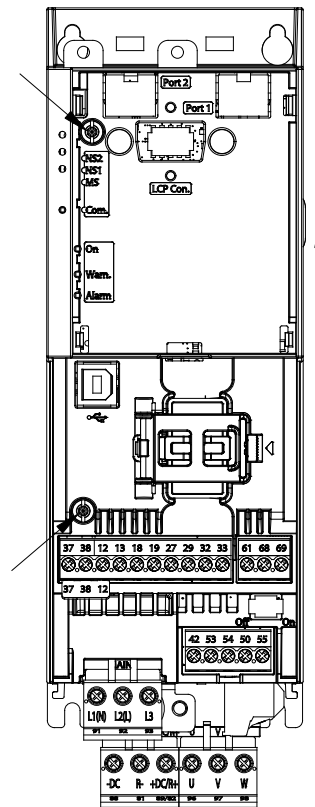
2. Remove the plastic cover beneath the LCP by pushing down the lock lever with a flat-edged screwdriver and lift the plastic cover upwards, as shown in *Illustration 1.2*.



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Illustration 1.2 Remove Cover

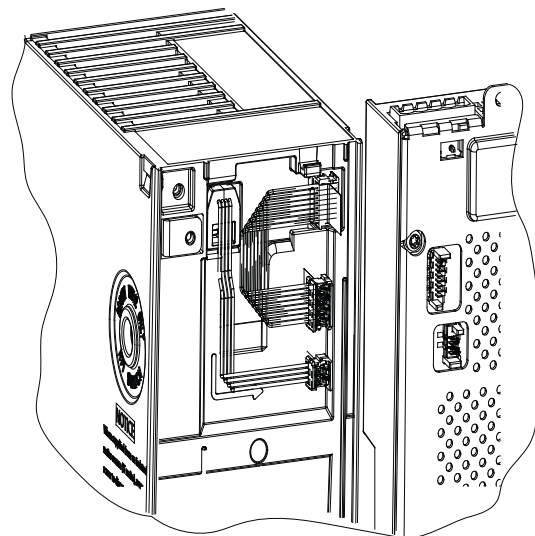
3. Loosen the old control card cassette by removing the 2 screws (T10, M3x6) on the left side, as shown in *Illustration 1.3*.



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Illustration 1.3 Loosen the Old Control Card Cassette

4. Slide the old control card cassette upwards to release it from the power section.
5. Connect the new control cassette with the frequency converter as shown in *Illustration 1.4*.



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Illustration 1.4 Connect the New Control Cassette

- Place the new control cassette on the frequency converter and slide it into place.

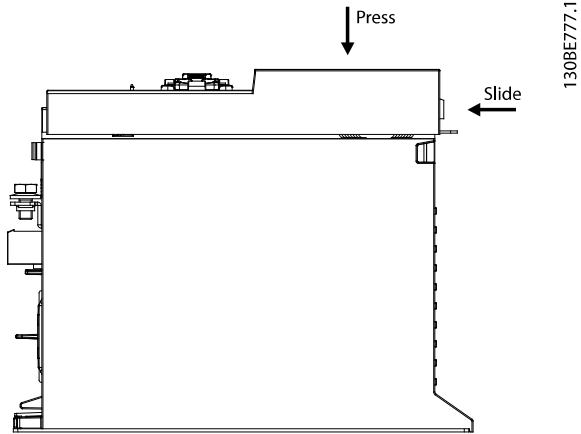
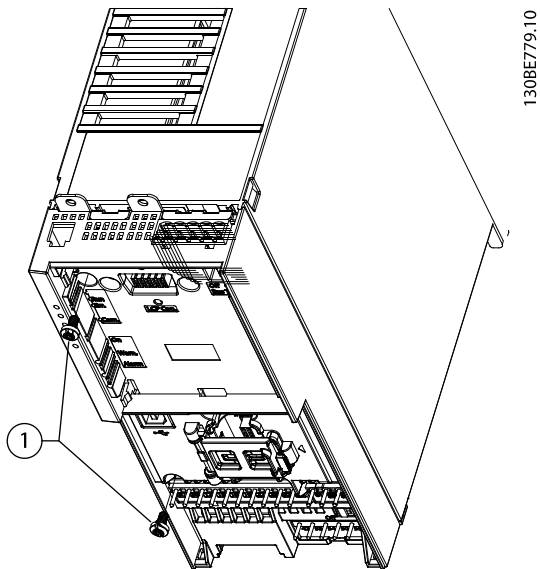


Illustration 1.5 Slide the New Control Cassette into Place

- Fasten the new control cassette on the frequency converter using 2 screws (supplied). Tightening torque: 0.7–1.0 Nm (6.2–8.8 lb-in).



1	Screws
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Illustration 1.6 Tighten Screws

## NOTICE

For the new control cassette to be properly recognized by the frequency converter, update the software in the frequency converter every time a new control cassette is installed via the MCT 10 Set-up Software.

- Select MCT 10 Set-up Software in the *Start* menu.
- Select *Configure bus*.
- Fill in the relevant data in the *Serial fieldbus configuration-window*.
- Click the *Scan bus*-icon and find the frequency converter.
  - 4a The frequency converter appears in the *ID-view*.
- Click *Software upgrader*.
- Select the *oss* file.
- In the dialog window, tick *Force upgrade* and then click *Start upgrade*.
  - 7a The firmware flashes.
- Click *Done* when the upgrade is complete.

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